PROTERIAL

Proterial Cable America Inc.

Fiber Optic
Cable Catalog

PROTERIAL

Fiber Optic Cable

Since 1986, Proterial Cable America has been developing technologically advanced copper and fiber optic communication cables. Our dedication to engineering perfection is evident in the consistent quality and performance of all the cable products we manufacture.

Through the development of high performance cable products, such as the world's first UL verified 10-gigabit Ethernet Category 6A cable, Proterial Cable has established itself as a leader in the industry. These products and the others found in this catalog are the result of Proterial Cable's relentless desire to manufacture the finest communication cables in the world. After using our products, we are confident you will agree.

Trademarks Referenced In This Catalog:

Power+™, NanoCore® are Trademarks or registered trademarks of Proterial Cable America, Inc.

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Introduction

Fiber

Fiber Solutions

Indoor / Outdoor Fiber Solutions

NanoCore®

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Quality Products Made in America.

Proterial's Manufacturing Advantage

We never stop innovating. Whether it's installing the very latest in cable manufacturing technology, or designing and building custom equipment for a one of a kind cable, we have the resources to maintain a technological edge over the competition. We're ISO certified 9001-2015, so you can be confident that all of our processes and materials are properly tracked and recorded.

On-Site Copper Extrusion

The Manchester, New Hampshire facility is one of a handful of cable manufacturing facilities in the U.S. that performs on-site drawing of copper. When drawing copper, PCA starts with 13 AWG solid copper conductor on custom built deploying devices, called Stems. The copper is pulled into drawing mills where it is reduced to the appropriate size, conditioned in what is called the annealing process, then insulated with the appropriate insulation. This allows us to better control the performance of the primary conductors and maximize overall cable performance.

Fully Compliant.

All the products manufactured within our facility are compliant to EU Directive 2011/65/ EU, also known as the Restriction of Hazardous Substances (RoHS3) which regulates the use of harmful materials such as lead, cadmium and mercury.

Packaging Engineered for Easy-Payout

Our easy-payout boxes for Category 5e and Category 6 cables were designed with direct input and feedback from users.

Our boxes feature dual reinforced handles and have proven to be as durable as the cable they contain.

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We Take the Worry out of Warranty.

The Open System Architecture Solution

Open System Architecture (OSA) from Proterial Cable America (PCA) provides world class performance using virtually any combination of PCA verified cables with verified connective hardware in the design of the network. The ANSI/TIA-568.2-D standard specifies the performance requirements of all network components and defines interoperability base-line limits to ensure that combinations of cable with connectivity will meet or exceed the system's intended application.

By employing a Proterial OSA solution, end users have the freedom to choose from a wide range of quality connectivity products that best meet their specific needs and be confident that the chosen solution will support all applications designed to operate over that solution and be backed by our industry-leading lifetime warranty*.

- Our open system architecture provides for standards-based verifiable cable performance
- Enables a range of connectivity options
- Opens up competitive solution offerings
- Delivers substantial benefits to the end user

Cable Quality Matters.

In cable based communication links, the cable determines the ultimate performance of that link, not the connectors.

With a growing list of applications for category cables, many of them critical to a facility's operations, selecting a high quality cable from an established manufacturer is imperative. Additionally, with an increase in counterfeit and unestablished brands flooding the market, it is important to protect your investment by sourcing only through trusted distribution channels.

- Cable is the highest cost component of passive infrastructures
- Cable determines margin of performance headroom in the link and channel
- Cable vendor should be the lead warranty provider

*Lifetime Warranty available only through Proterial certified installers.

Beyond-The-Link Building Systems

- Wireless Access Points
- Security Cameras
- Access Control
- Data
- IP Based Lighting
- HDBaseT
- HDMI
- Fiber

Fiber Cable to Utilities

We offer a Lifetime Warranty

We are pleased to offer a lifetime warranty on all certified installations.

The lifetime warranty, which is only available through Proterial Cable Certified Installers, offers a product performance and application assurance warranty.

We guarantee that the solution will pass the appropriate category test for the life of the network as well as support all applications designed to operate over that solution. The warranty covers both the cables and all the connective hardware directly attached to our cable. This also includes any labor that could be associated with a warranty claim.

Our Warranty Systems Feature:

- Compliance to TIA and ISO Cabling Standards
- Lifetime Product Performance Warranty
- Lifetime Applications Support Warranty
- Open Architecture Connectivity Specification
- One Point-of-Contact for all Warranty Features

PROTERIAL

Indoor Tight Buffered Interconnect - Plenum

Multimode & Single Mode 2-fiber
(UL) OFNP c(UL) OFNP FT6

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- 900 micron buffered design recommended for easy termination
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Ideal for patch cords, interconnections, and short runs
- Easy to strip and terminate
- Lightweight, flexible aramid yarns enhance strength

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1
  Aqua: OM3 & OM4
  Note: Erika Violet for OM4 is available.

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
  -40° to 70°C
  (-40° to 158°F)
- **Installation Temperature**
  0° to 60°C
  (32° to 140°F)
- **Operation Temperature**
  0° to 70°C
  (32° to 158°F)

DIELECTRIC MATERIALS

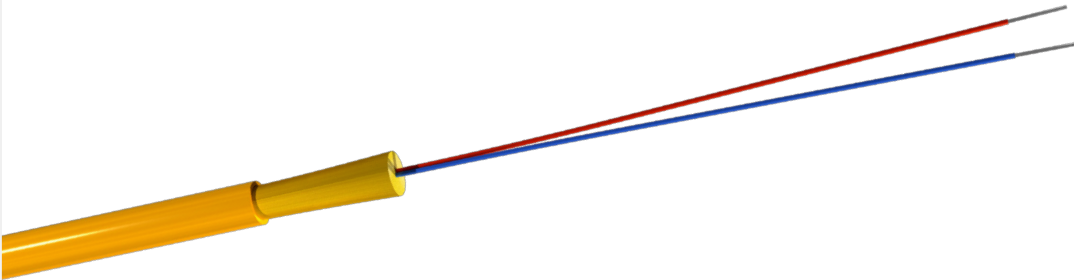- **Plenum**
  Overall Jacket: Flame-retardant Thermoplastic

Indoor Tight Buffered Interconnect - Plenum

Fibers	Cable O.D. inches / mm	62.5 UM OM1	50 UM OM3	50 UM OM4	8.3 UM OS2
2	0.114" / 2.9mm	60042-2	60472-2	61851-2	60044-2
zip	.079" x .170" / 2.0mm x 4.3mm	61379-2	61457-2	61986-2	61378-2
zip	.113" x .235" / 2.9mm x 6.0mm	60023-2	60502-2	61857-2	60030-2

Standard Jacket Colors

OM1	OM3/OM4	OS2

Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.

Proterial Cable America, Inc. is continuously improving the performance of our products and the accuracy of the information provided. Due to this, we reserve the right to modify, revise, correct, or change products without notice. Thank you for your understanding.

Specifications by Fiber Count

Fibers	Max Install Load Lbs.	Max Install Load Newtons	Operating Max Load Lbs	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
2	96	427	29	128	6.4	9.5
zip	96	427	48	213	6.27	9.3
zip	128	569	64	284	13.2	19.6

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter

ASSEMBLY DETAIL

*These cable designs utilize color-coded binders to separate subunits
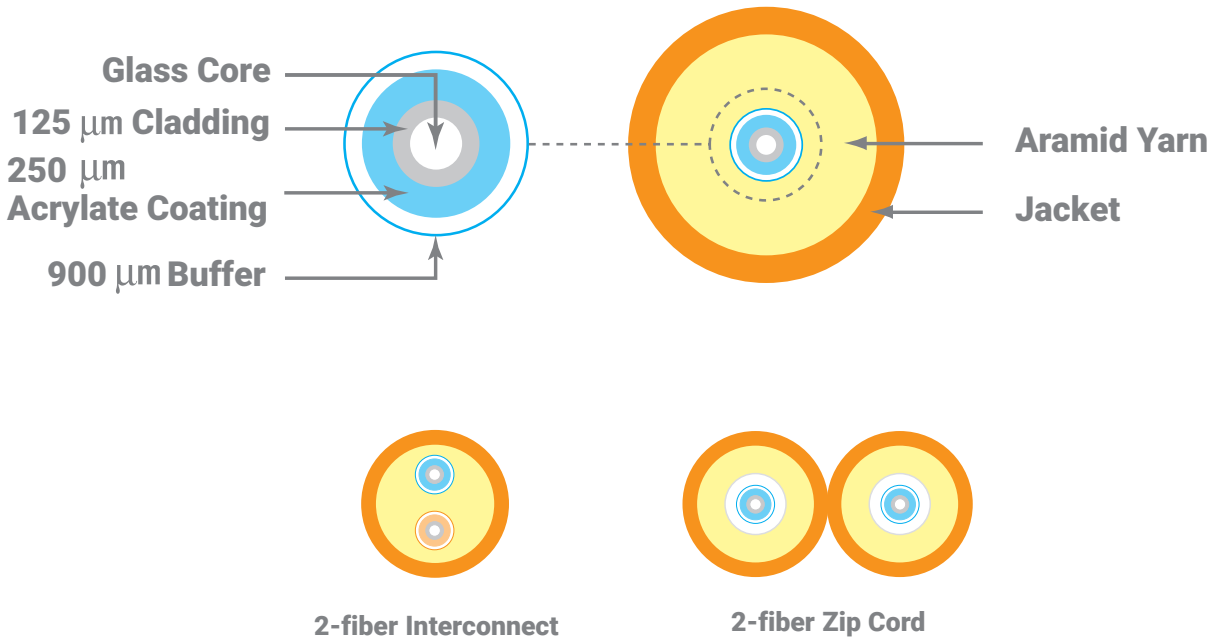DJ = Dual jacket design

- Glass Core
- 125 μm Cladding
- 250 μm Acrylate Coating
- 900 μm Buffer
- Aramid Yarn
- Jacket

2-fiber Interconnect

2-fiber Zip Cord

Diagram scale approx. 5:1

Photo is for representation purposes only.

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- 900 micron buffered design recommended for easy termination
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Each fiber is color coded for easy identification
- Ideal intra-building cable solution
- Flexible and easy to handle.
- Lightweight, flexible aramid yarns enhance strength.

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)
- Standard jacket colors are:
    Yellow: OS2
    Orange: OM1
    Aqua: OM3 & OM4
    Note: Erika Violet for OM4 is available.

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
    -40° to 70°C
    (-40° to 158°F)
- **Installation Temperature**
    0° to 60°C
    (32° to 140°F)
- **Operation Temperature**
    0° to 70°C
    (32° to 158°F)

DIELECTRIC MATERIALS

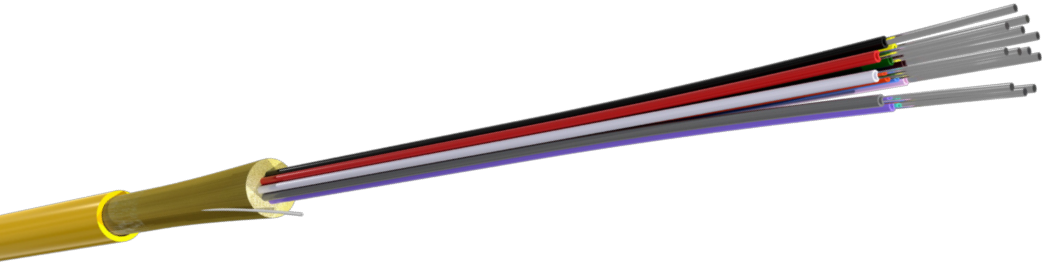- **Plenum**
    Overall Jacket: Flame-retardant Thermoplastic

Indoor Tight Buffered Single-Unit Plenum

Fibers	Cable O.D. inches / mm	62.5 UM OM1	50 UM OM3	50 UM OM4	8.3 UM OS2
4	0.190" / 4.8mm	60517-4	60522-4	61868-4	60029-4
6	0.190" / 4.8mm	60517-6	60522-6	61868-6	60029-6
12	0.230" / 5.8mm	60517-12	60522-12	61868-12	60029-12
24	0.330" / 8.4mm	60517-24	60522-24	61868-24	60029-24

Standard Jacket Colors

OM1 | OM3/OM4 | OS2

Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.

Proterial Cable America, Inc. is continuously improving the performance of our products and the accuracy of the information provided. Due to this, we reserve the right to modify, revise, correct, or change products without notice. Thank you for your understanding.

Specifications by Fiber Count

Fibers	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
4	128	569	38	171	14.5	21.6
6	128	569	38	171	15.7	23.4
12	160	712	48	214	23.0	34.3
24	288	1282	86	385	50.3	74.9

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter
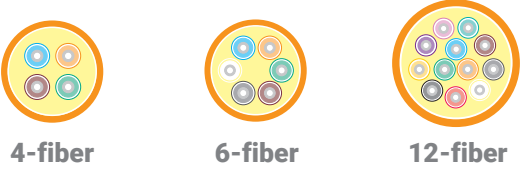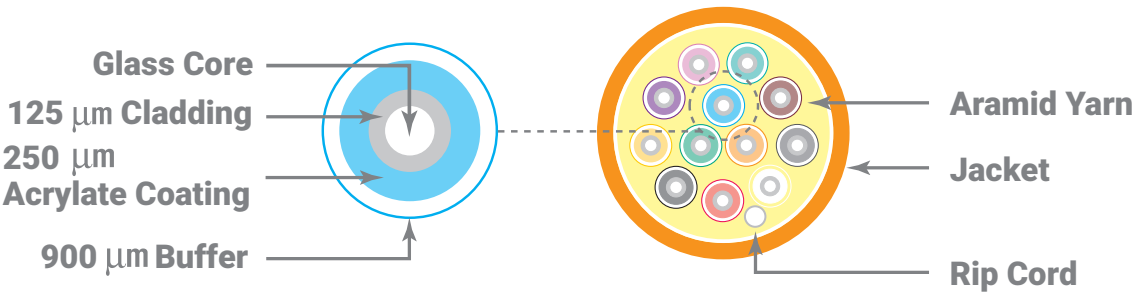
ASSEMBLY DETAIL

Glass Core
125 μm Cladding
250 μm Acrylate Coating
900 μm Buffer

Aramid Yarn
Jacket
Rip Cord

4-fiber   6-fiber   12-fiber

Diagram scale approx. 2:1

Photo is for representation purposes only.

PROTERIAL

Indoor Tight Buffered Multi-Unit Plenum
Plenum - Multimode & Single Mode - 24 through 72 fibers
(UL) OFNP c(UL) OFNP FT6

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- 900 micron buffered design recommended for easy termination
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Each fiber is color coded for easy identification
- Ideal intra-building cable solution
- Flexible and easy to handle
- Compact distribution design
- Lightweight, flexible aramid yarns enhance strength.

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657. A2)
- Standard jacket colors are:
  Yellow: OS2
  Orange: OM1
  Aqua: OM3 & OM4

Note: Erika Violet for OM4 is available.

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
  -40° to 70°C
  (-40° to 158°F)
- **Installation Temperature**
  0° to 60°C
  (32° to 140°F)
- **Operation Temperature**
  0° to 70°C
  (32° to 158°F)

DIELECTRIC MATERIALS

- **Plenum**
  Overall Jacket: Flame-retardant Thermoplastic
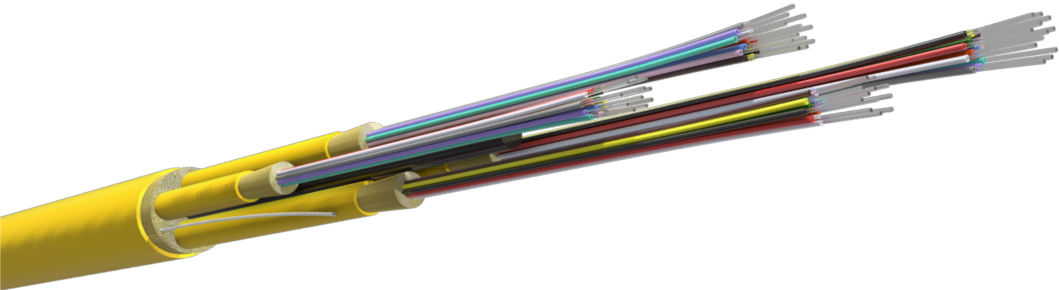
Indoor Tight Buffered Multi-Unit - Plenum

Fibers	Cables O.D. inches / mm	62.5 UM OM1	50 UM OM3	50 UM OM4	8.3 UM OS2
24	0.518" / 13.1mm	60258-24	60598-24	61877-24	60634-24
48	0.614" / 15.5mm	60027-48	60614-48	61879-48	60033-48

Standard Jacket Colors

OM1 | OM3/OM4 | OS2

Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.
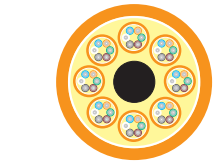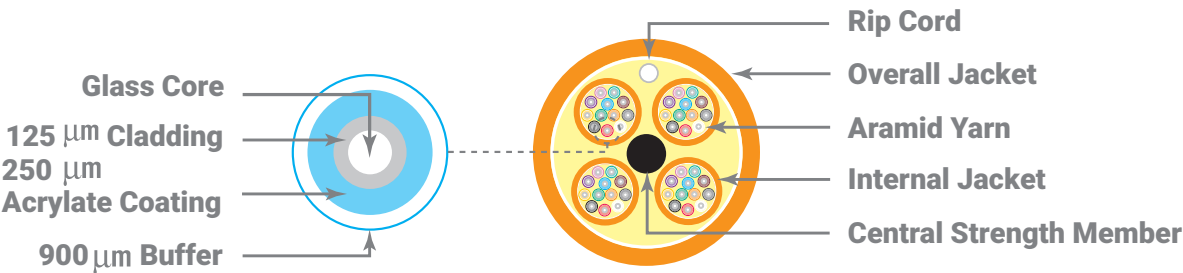
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Specifications by Fiber Count

Fibers	Fibers/ Tube	Tube Layout	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
24	6	4xCSM	512	2279	154	684	97.0	144.5
48	12	4xCSM	640	2848	192	854	139.0	207.1

CMS = Central Strength Member

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter

ASSEMBLY DETAIL

*These cable designs utilize color-coded binders to separate subunits
DJ = Dual jacket design

Glass Core
125 μm Cladding
250 μm
Acrylate Coating
900 μm Buffer

Rip Cord
Overall Jacket
Aramid Yarn
Internal Jacket
Central Strength Member

48-fibers
(8 tubes of 6-fibers)

48-fibers
(4 tubes of 12-fibers)
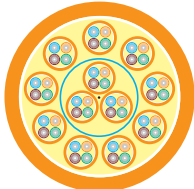
48-fibers
(12 tubes of 4-fibers)

Diagram scale approx. 1:1

Photo is for representation purposes only.

Fiber

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- 900 um buffered design recom-mended for easy termination
- Eliminates need for inner duct or conduit
- Aluminum interlock armor.
- Each fiber is color coded for easy identification
- Ideal intra-building cable solution.
- Flexible and easy to handle
- Lightweight, flexible aramid yarns enhance strength

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)
- Standard jacket colors are:
  - Yellow: OS2
  - Orange: OM1
  - Aqua: OM3 & OM4
- *Note: Erika Violet for OM4 is available.*

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
  - -40° to 70°C
  - (-40° to 158°F)
- **Installation Temperature**
  - 0° to 60°C
  - (32° to 140°F)
- **Operation Temperature**
  - 0° to 70°C
  - (32° to 158°F)

DIELECTRIC MATERIALS

- **Riser**
  Overall Jacket: Flame-retardant Thermoplastic

Indoor Armored Tight Buffered Plenum

Fibers	Cable O.D. inches / mm	62.5 UM OM1	50 UM OM3	50 UM OM4	8.3 UM OS2
6	0.520" / 13.21mm	60405-6	61337-6	61897-6	61433-6
12	0.520" / 13.21mm	60405-12	61337-12	61897-12	61433-12
24	0.643" / 16.33mm	60405-24	61337-24	61897-24	61433-24
48	0.964" / 24.49mm	62183-48	62185-48	62186-48	62187-48

Standard Jacket Colors

OM1   OM3/OM4   OS2

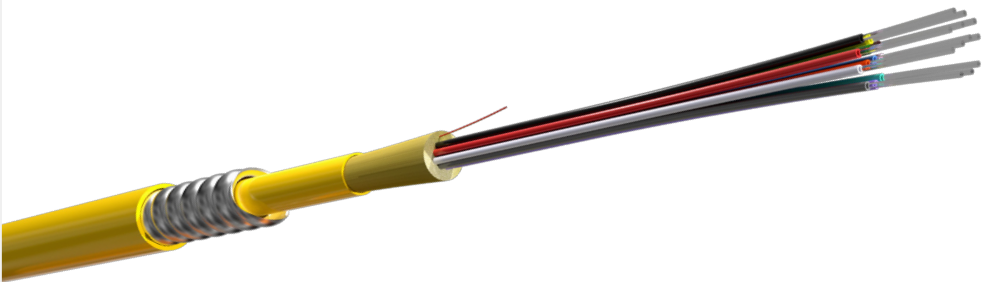### Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.

Specifications by Fiber Count

Fibers	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
6	128	570	38	171	96.2	143.1
12	160	712	48	214	103.3	153.7
24	288	1282	86	385	158.1	235.3
48	640	2849	192	855	305.7	454.9

MECHANICAL SPECS

- Bend radius, no load
  = 10x cable overall diameter
- Bend radius, load
  = 15x cable overall diameter

ASSEMBLY DETAIL

Rip Cord
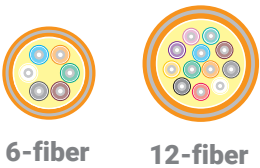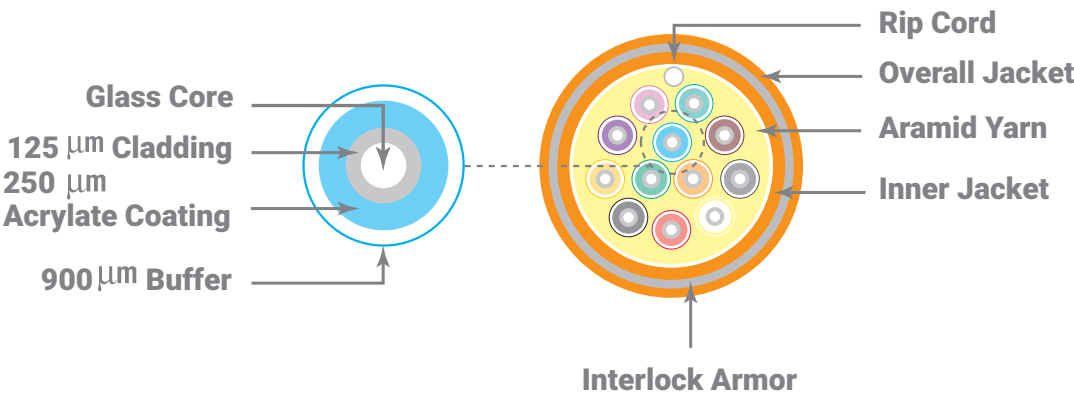Overall Jacket
Aramid Yarn
Inner Jacket
Interlock Armor

Glass Core
125 μm Cladding
250 μm Acrylate Coating
900 μm Buffer

6-fiber   12-fiber
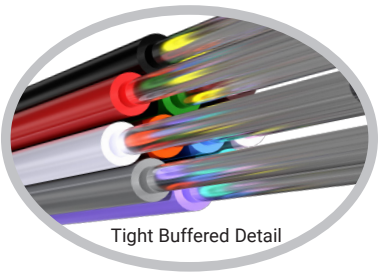
Diagram scale approx. 2:1

Tight Buffered Detail

Photo is for representation purposes only.

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- UV and fungus resistant jacket
- Tight buffered construction
- Easy to strip and terminate
- Each fiber is color coded for easy identification
- Dry, super absorbent polymers (SAPs) eliminate water migration in cable interstices
- Suitable for lashed aerial, duct, underground conduit and indoor plenum applications
- 900um buffered design recommended for easy termination
- Cables with more than 24 fibers have fibers segregated into 12-fiber sub-units

OPTIONS

- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
  -40° to 70°C
  (-40° to 158°F)
- **Installation Temperature**
  0° to 60°C
  (32° to 140°F)
- **Operation Temperature**
  -40° to 70°C
  (-40° to 148°F)

DIELECTRIC MATERIALS

- **Plenum**
  Overall Jacket: Flame-retardant Thermoplastic

Indoor / Outdoor Tight Buffered Plenum

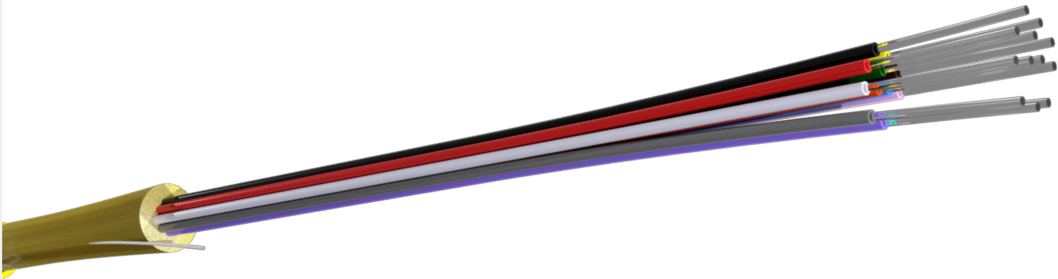| Fibers	Cable O.D. inches / mm	62.5 UM OM1	50 UM OM3	50 UM OM4	8.3 UM OS2
2	0.190" / 4.8mm	61460-2	61468-2	61894-2	61459-2
6	0.190" / 4.8mm	61460-6	61468-6	61894-6	61459-6
12	0.230" / 5.8mm	61460-12	61468-12	61894-12	61459-12
24	0.330" / 8.4mm	61460-24	61468-24	61894-24	61459-24
48	0.627" / 15.9mm	61979-48	61959-48	61980-48	61480-48

Standard Jacket Colors

Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.

Specifications by Fiber Count

Fibers	Fibers / Tube	Tube Layout	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
2	2	x	128	570	38	171	12.6	18.8
6	5	x	128	570	38	171	15.1	22.5
12	12	x	160	712	48	214	22.5	33.5
24	24	x	288	1282	86	385	50.2	74.8
48	12	4xCSM	640	2849	192	855	135.1	201.1

CSM = Central Strength Member

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 20x cable overall diameter

ASSEMBLY DETAIL

- Glass Core
- 125 μm Cladding
- 250 μm Acrylate Coating
- 900 μm Buffer
- Rip Cord
- Outer Jacket
- SAP Impregnated Aramid Yarn
- Internal Jacket
- Central Strength Member

6-fiber   12-fiber   48-fibers (4 tubes of 12-fibers)

Diagram scale approx. 3:1

Tight Buffered Detail

Photo is for representation purposes only.

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Eliminates need for innerduct or conduit
- Aluminum interlock armor standard
- Each fiber is color coded for easy identification
- Ideal cable solution for campus environments
- Flexible and easy to handle
- UV and fungus resistant jacket
- Dry, super absorbent polymers (SAPs) eliminate water migration in cable interstices
- Suitable for lashed aerial, duct, underground conduit and indoor plenum applications
- 900um buffered design recommended for easy termination

OPTIONS

- Standard color configuration is a black outer jacket with a black inner jacket.
- Enhanced bend insensitive OS2 optical fiber is available (ITU-T G.657.B3 & G.657.A2)

APPLICATIONS

- Applications include 10, 40 & 100 gigabit Ethernet, Fiber Channel, Video, Security, Automation

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE

TEMPERATURE RANGE

- **Storage Temperature**
  -40° to 70°C
  (-40° to 158°F)
- **Installation Temperature**
  0° to 60°C
  (32° to 140°F)
- **Operation Temperature**
  -40° to 70°C
  (-40° to 158°F)

DIELECTRIC MATERIALS

- **Plenum**
  Overall Jacket: Low smoke, Flame retardent thermoplastic

Indoor / Outdoor Armored Tight Buffered Plenum

Fibers	Cable O.D. inches / mm	62.5 UM OM1	50 UM OM3	50 UM OM4	8.3 UM OS2
6	0.48" / 12.192mm	61580-6	61578-6	62068-6	61579-6
12	0.52" / 13.208mm	61580-12	61578-12	62068-12	61579-12
24	0.64" / 16.26mm	61580-24	61578-24	62068-24	61579-24

Standard Jacket Colors

Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.

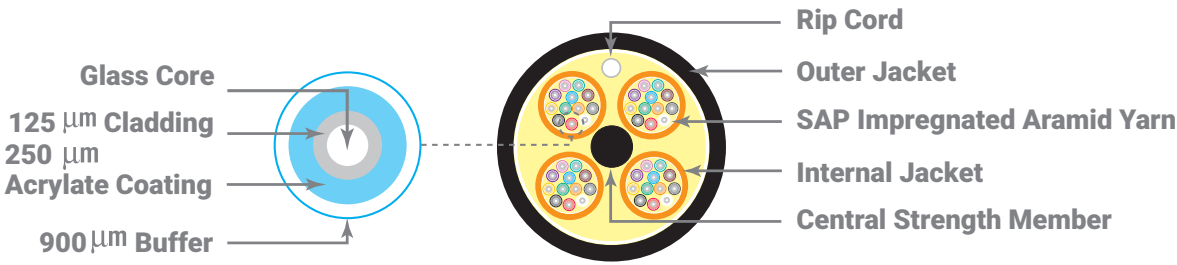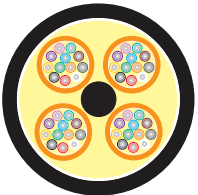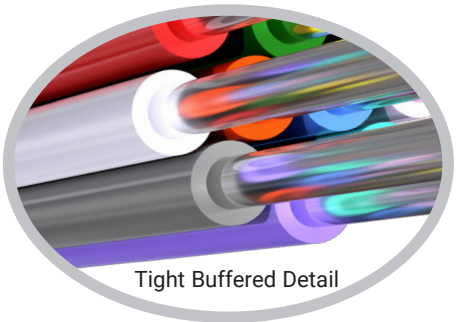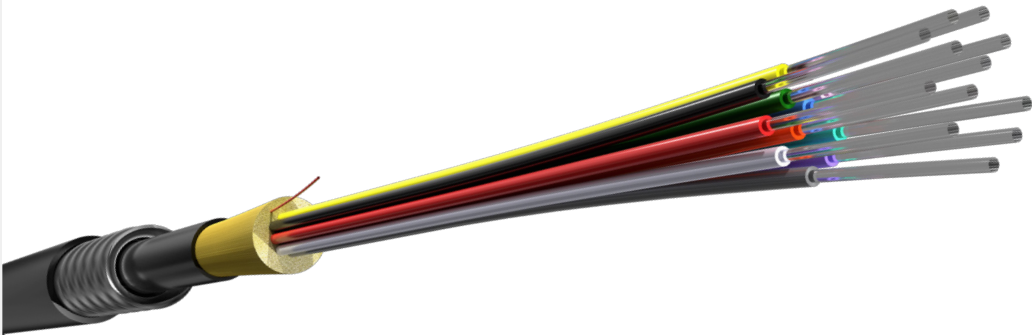### Specifications by Fiber Count

Fibers	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
6	300	1335	100	445	103.0	153.3
12	300	1335	100	445	111.8	166.4
24	300	1335	100	445	164.1	244.2

MECHANICAL SPECS

- Bend radius, no load = 15x cable overall diameter
- Bend radius, load = 20x cable overall diameter

ASSEMBLY DETAIL

Rip Cord
Glass Core
125 μm Cladding
250 μm Acrylate Coating
900 μm Buffer
SAP Impregnated Aramid Yarn
Inner Jacket
Outer Jacket
Interlock Armor

Tight Buffered Detail

12-fiber
Diagram scale approx. 2:1

Photo is for representation purposes only.

Indoor / Outdoor Fiber

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- Extending PoE and Limited Power SELV data transmission beyond 100 meters.
- Provides immunity from electro magnetic and radio frequency interference.
- Choice of separate power conductors heat generation and length derating calculations as required by TIA 568 and NEC.
- Plenum and outdoor rating permits
- Dry, super absorbent polymers (SAPs)
- Suitable for lashed aerial, duct
- All multimode and singlemode cables
- (except OM1) utilize bend-insensitive optical fibers.

OPTIONS

- Available with 2, 6 or 12 strands of fiber.
- Available with 1 pair of 12, 14, 16, 18, or 20 AWG stranded conductors.

APPLICATIONS

- High noise areas and extended
- distance.
- Security CCTV Cameras.
- Wireless Access Points.
- Distributed Antenna Systems (DAS).

STANDARDS

- NEC CL2P-OF, CL3P-OF and CMP-OF rating, compliant with
- Class 2 SELV (Safety Extra Low Voltage).
- NFPA 262.
- ANSI/TIA 568-D.3

TEMPERATURE RANGE

- **Storage Temperature**
  -40°C to +70°C
  (-40°F to +158°F)
- **Installation Temperature**
  0°C to +60°C
  (+32°F to +140°F)
- **Operation Temperature**
  -40°C to +70°C
  (-40°F to +158°F)

Proterial Cable America, Inc. is continuously improving the performance of our products and the accuracy of the information provided. Due to this, we reserve the right to modify, revise, correct, or change products without notice. Thank you for your understanding.
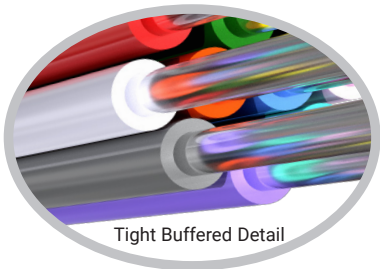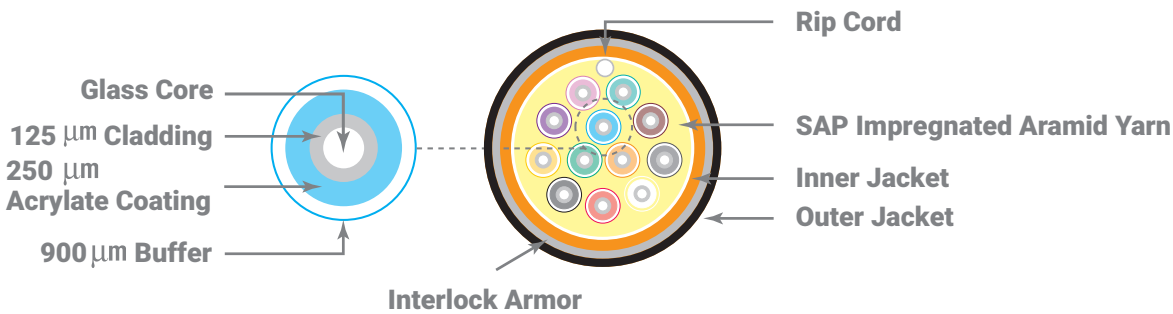
Power+ FO Cable Part Numbers 20 AWG

Fibers	Cable O.D. inches / mm	50 UM OM4	8.3 UM OS2
2	0.22" / 6.2mm	42368-4	42367-4
6	0.33" / 8.4mm	42368-8	42367-8
12	0.41" / 10.5mm	43268-14	42367-14

Power+ FO Cable Part Numbers 18 AWG

Fibers	Cable O.D.mm inches / mm	50 UM OM4	8.3 UM OS2
2	0.27" / 6.8mm	42370-4	42369-4
6	0.33" / 8.4mm	42370-8	42369-8
12	0.40" / 10.2mm	42370-14	42369-14

Power+ FO Cable Part Numbers 16 AWG

Fibers	Cable O.D.mm inches / mm	50 UM OM4	8.3 UM OS2
2	0.28" / 7.1mm	42372-4	42371-4
6	0.3 3" / 8.4mm	42372-8	42371-8
12	0.41" / 10.5mm	42372-14	42371-14

Power+ FO Cable Part Numbers 14 AWG

Fibers	Cable O.D.mm inches / mm	50 UM OM4	8.3 UM OS2
2	0.29" / 7.4mm	42378-4	42373-4
6	0.36" / 9.2mm	42378-8	42373-8
12	0.43" / 10.8mm	42378-14	42373-14

Power+ FO Cable Part Numbers 12 AWG

Fibers	Cable O.D.mm inches / mm	50 UM OM4	8.3 UM OS2
2	0.30" / 7.7mm	42379-4	42376-4
6	0.40" / 10.1mm	42379-8	42376-8
12	0.44" / 11.3mm	42379-14	42376-14

12 Fiber

2 Fiber

6 Fiber

- Jacket
- Sub Unit Jacket
- 900 um Fiber
- Copper Conductor
- SAP Impregnated Yarn
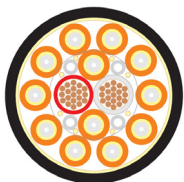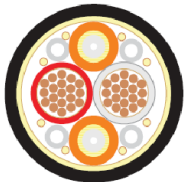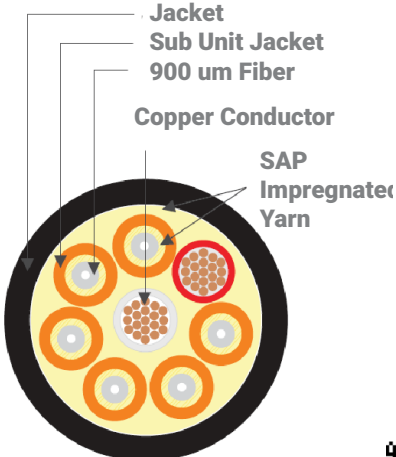
Safety Extra Low Voltage (SELV) 48Vdc PSE / 43Vdc PD

	Powered Device at Load (Watts)				
	6.49W	12.95W	25.5W	51W	71W
AWG	Remote Power Distance (feet)				
20	1,574	789	401	200	144
18	2,500	1,253	636	318	229
16	3,974	1,992	1,011	506	363
14	6,339	3,177	1,683	807	579
12	10,047	5,035	2,557	1,279	918

Safety Extra Low Voltage (SELV) 56Vdc PSE / 48Vdc PD

	Powered Device at Load (Watts)				
	6.49W	12.95W	25.5W	51W	71W
	Remote Power Distance (feet)				
	2,915	1,461	742	371	266
	4,630	2,320	7,178	589	423
	7,359	3,688	1,873	936	673
	11,740	5,883	2,988	1,498	1,073
	18,606	9,325	4,735	2,368	1,701

TIA/EIA-568-D.3 I ISO/ IEC 11801, 2nd edition I Telcordia GR-409-CORE

Fiber Type	Max. Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-km)		Gb Ethernet distance (m)		10 Gb Ethernet distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000
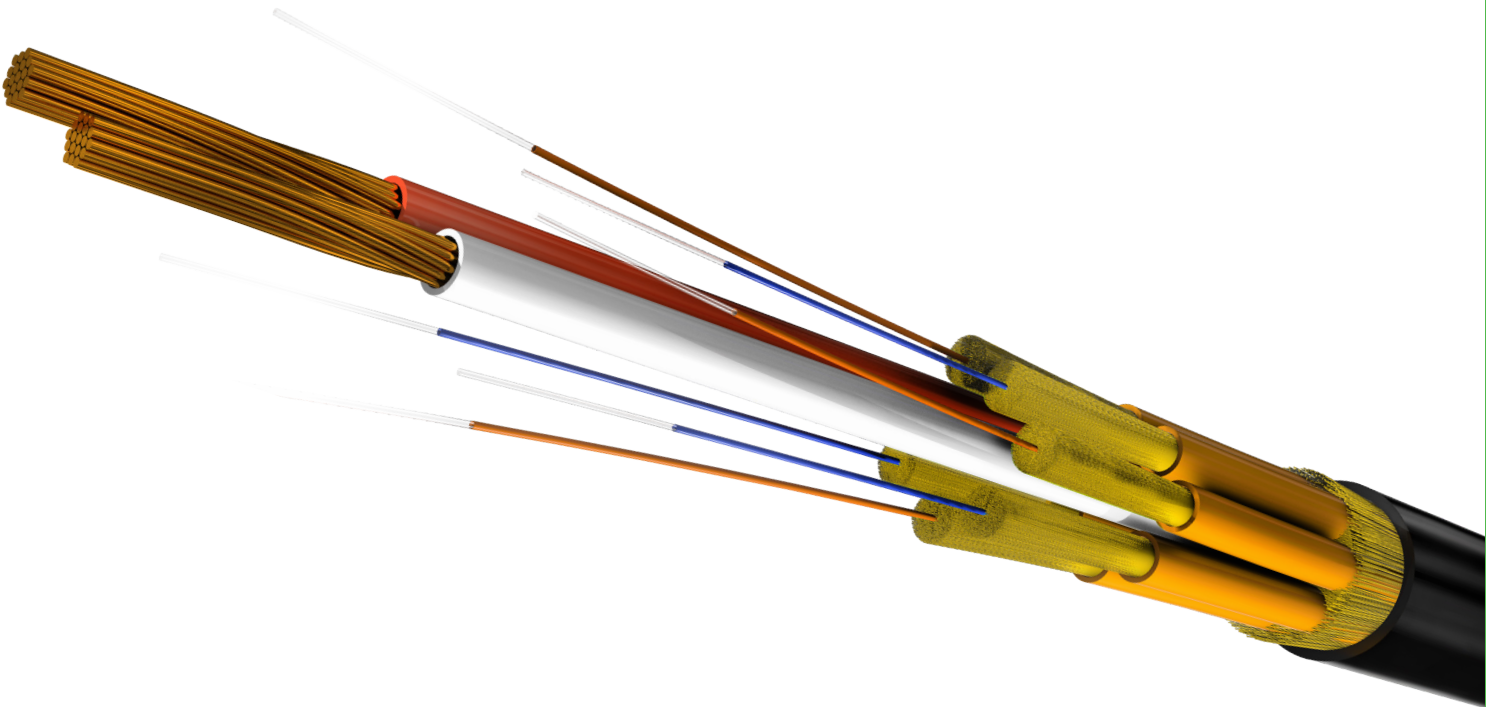
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Power+ Composite™

PROTERIAL

NanoCore® Interconnect Plenum
Single Jacket Indoor Loose Tube - 2 through 24 fibers
(UL) OFNP c(UL) OFNP FT6

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- 250 micron loose tube design allows for higher fiber strand counts in a smaller overall diameter cable
- Ideal for MPO (MTP®) style connectors
- Each fiber is color coded for easy identification
- Flexible and easy to handle
- Lightweight, flexible Aramid yarns enhance strength
- Now available with a smaller outside diameter
- When necessary, color-coded binders separate fiber strands into bundles of 12

OPTIONS

- Enhanced bend insensitive OS2 optical fiber available (ITU-T G.657.B3 & G.657.A2)
- 16 Fiber colors available
- Colored threads are used to bundle fibers
- OS2 optical fibers with enhanced bend-insensitive performance are available.
- OM4+ and OM5 Available

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

TEMPERATURE RANGE

- **Storage Temperature**
  -40°C to 70°C
  (-40°F to 158°F)
- **Installation Temperature**
  0°C to 60°C
  (32°F to 140°F)
- **Operation Temperature**
  0°C to 70°C
  (32°F to 158°F)

DIELECTRIC MATERIALS

- **Plenum**
  Overall Jacket: Flame-retardant Thermoplastic

NanoCore Interconnect (Single Jacket) Micro Distribution

Fibers	Fibers / Fundle / Tube	Cable O.D. inches / mm	50 UM OM3	50 UM OM4	8.3 UM OS2
2	-	0.078" / 2.0mm	62243-2	62244-2	62239-2
2	-	0.118" / 3.0mm	61507-2	61883-2	61538-2
4	-	0.118" / 3.0mm	61507-4	61883-4	61538-4
12	-	0.078" / 2.0mm	62243-12	62244-12	62239-12
12	-	0.118" / 3.0mm	61507-12	61883-12	61538-12
12	-	0.150" / 3.8mm	62374-12	62375-12	62371-12
12 DJ	-	0.189" / 4.8mm	62449-12	62450-12	62460-12
16	-	0.118" / 3.0mm	62685-16	62686-16	62689-16
16*	8 X 2	0.118" / 3.0mm	62694-16	62695-16	62698-16
24*	12 X 2	0.118" / 3.0mm	62243-24	62244-24	62239-24
24*	12 X 2	0.150" / 3.8mm	62374-24	62375-24	62371-24
24*	12 X 2	0.177" / 4.5mm	61507-24	61883-24	61538-24
24	12	0.118" / 3.0mm 0.255" / 6.47mm	61539-24	61882-24	61547-24

Standard Jacket Colors

OM3/OM4   OS2
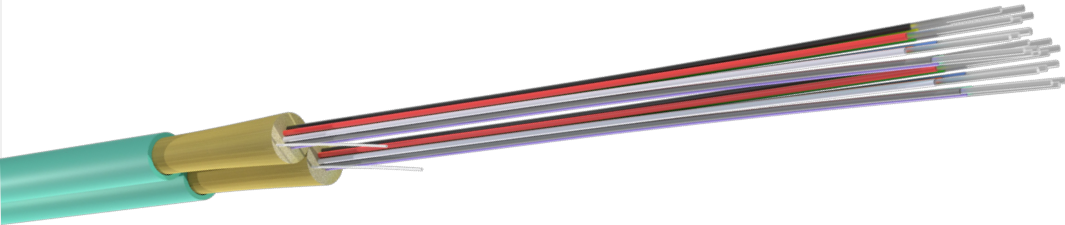
Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.

NanoCore® Interconnect Plenum
Single Jacket Indoor Loose Tube - 2 through 24 fibers
(UL) OFNP c(UL) OFNP FT6

Specifications by Fiber Count

Fibers	Max Install Load Lbs.	Max Install Load Newtons	Operating Max Load Lbs	Operating Max Load Newtons	Compression N/cm	Impact N-m	Cable Weight lbs/kft	Cable Weight Kg/Km
2	50	222	15	67	35	0.74	2.5	3.7
2	100	445	30	134	100	0.74	5.5	8.2
4	100	445	30	134	100	0.74	5.6	8.3
12	50	222	15	67	35	0.74	2.9	4.4
12	100	445	30	134	100	0.74	5.9	8.8
12	150	668	45	200	35	2.94	9.1	13.6
12 DJ	150	668	45	200	35	2.94	14.5	21.6
16	150	668	45	200	100	0.74	5.2	7.7
16*	150	668	45	200	100	0.74	5.2	7.7
24*	150	668	45	200	100	0.74	5.7	8.5
24*	150	668	45	200	35	2.94	9.7	14.5
24*	150	668	45	200	100	2.94	13.1	19.5
24	128	569	38	171	128	2.94	11.4	17.0

*These cable designs utilize color-coded binders to separate subunits.
DJ: Dual jacket design.

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter

Glass Core
125 µm Cladding
250 µm Acrylate Coating

Outer Jacket
Aramid Yarns
Rip Cord

12 Fiber   24 Fiber   Zip Cord

New 2mm cable has 33% smaller OD and 56% smaller area than 3mm cable.
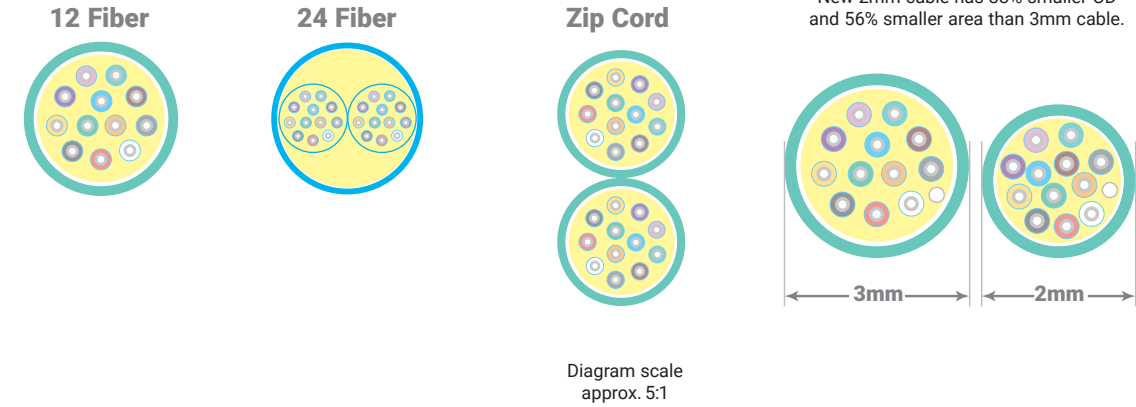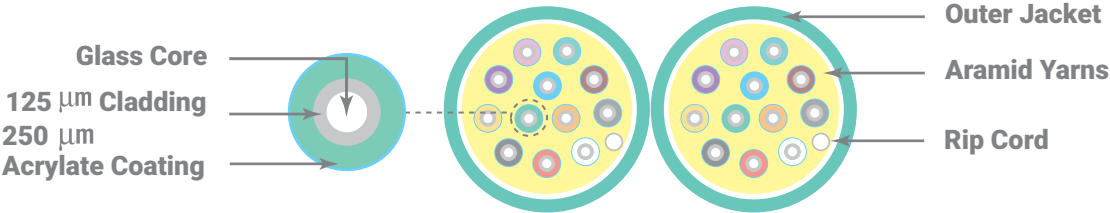
3mm   2mm

Diagram scale approx. 5:1

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NanoCore®

PROTERIAL

NanoCore® Micro Distribution Plenum
Mult-Unit Indoor Loose Tube - 24 through 144 fibers
(UL) OFNP c(UL) OFNP FT6

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Small, lightweight construction suitable for installations where space is at a premium
- Ideal for MPO (MTP®) style connectors
- Each fiber is color coded for easy identification
- Flexible and easy to handle

OPTIONS

- 8 fibers per tube available for cables up to 96 strands
- 16 fibers per tube and 24 fibers per tube up to 144 fiber
- OS2 optical fibers with enhanced bend insensitive performance are available.
- OM4+ and OM5 Available

APPLICATIONS

- Ideal for high-density installations like data centers, central offices and overall premise applications where current or future data rates include 40 and 100 gigabits per second

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

TEMPERATURE RANGE

- **Storage Temperature**
  -40°C to 70°C
  (-40°F to 158°F)
- **Installation Temperature**
  0°C to 60°C
  (32°F to 140°F)
- **Operation Temperature**
  0°C to 70°C
  (32°F to 158°F)

DIELECTRIC MATERIALS

- **PLENUM**
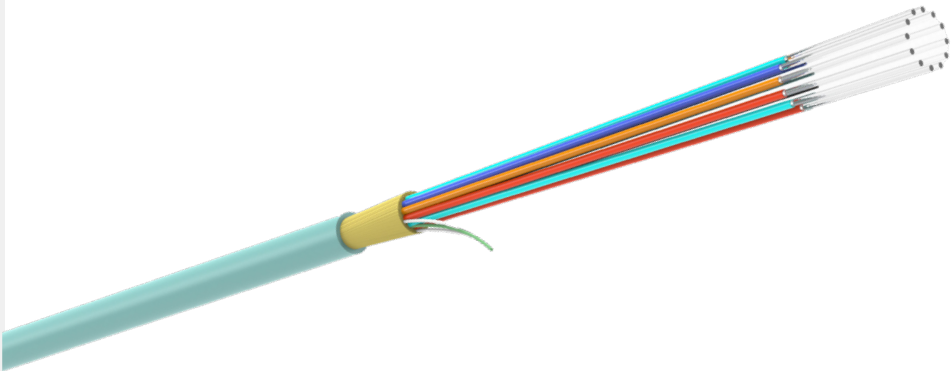 Overall Jacket: Flame-retardant Thermoplastic

NanoCore Multi-Unit Micro Distribution (Plenum)

Fibers	Fibers Per Tube	Tube O.D. inches / mm	50 UM OM3	50 UM OM4	8.3 UM OS2
24	12	0.079" / 2.0mm	62216-24	62218-24	62205-24
36	12	0.079" / 2.0mm	62216-36	62218-36	62205-36
48	12	0.079" / 2.0mm	62216-48	62218-48	62205-48
72	12	0.079" / 2.0mm	62216-72	62218-72	62205-72
96	12	0.079" / 2.0mm	62216-96	62218-96	62205-96
144	12	0.079" / 2.0mm	62216-144	62218-144	62205-144

Standard Jacket Colors

OM3/OM4   OS2

Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz/km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.


PROTERIAL

NanoCore® Micro Distribution Plenum
Mult-Unit Indoor Loose Tube - 24 through 144 fibers
(UL) OFNP c(UL) OFNP FT6

Specifications by Fiber Count

| Fibers	Tube Layout	Cable O.D. inches / mm	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
24	2+2FxCSM	0.296" / 7.5mm	150	668	45	200	36.4	54.2
36	3+1FxCSM	0.296" / 7.5mm	150	668	45	200	37.4	55.7
48	4xCSM	0.296" / 7.5mm	150	668	45	200	38.3	57.0
72	6xCSM	0.355" / 9.0mm	150	668	45	200	48.3	71.9
96	8xCSM	0.433" / 11mm	150	668	45	200	83.8	124.7
144	9x3xCSM	0.458" / 11.6mm	150	668	45	200	88.9	132.3

*These cable designs utilize color-coded binders to separate subunits
CSM = Central Strength Member
F = Filler
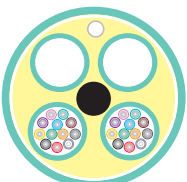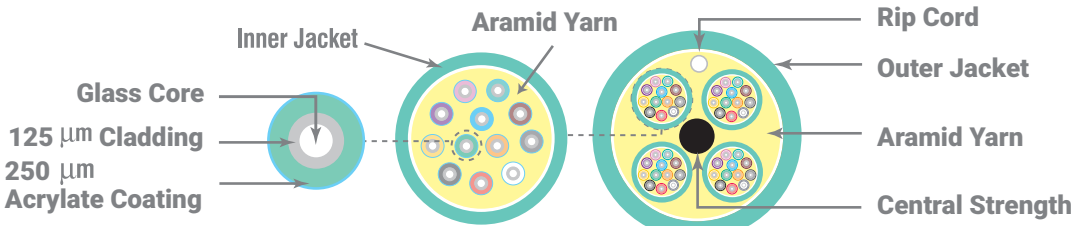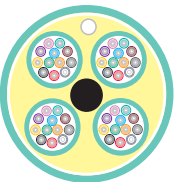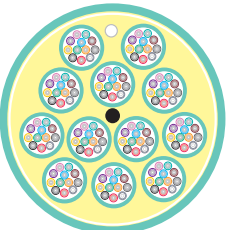
MECHANICAL SPECS

- Bend radius, no load
  = 10x cable overall diameter
- Bend radius, load
  = 15x cable overall diameter

Inner Jacket   **Aramid Yarn**   **Rip Cord**

Glass Core   **Outer Jacket**

125 µm Cladding   **Aramid Yarn**

250 µm Acrylate Coating   **Central Strength**

24 fibers   **48 fibers**   **144 fibers**

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Photo is for representation purposes only.

PROTERIAL

NanoCore® Armored Plenum
Indoor Loose Tube - 12 through 144 fibers
(UL) OFCP c(UL) OFCP FT6

FEATURES & BENEFITS

- RoHS 3 compliant
- Made in U.S.A.
- All multimode, and singlemode cables (except OM1) utilize bend-insensitive optical fibers
- Eliminates need for inner duct or conduit
- Ideal for MPO (MTP®) style connectors
- Aluminum interlock armor
- Each fiber is color coded for easy identification
- Flexible and easy to handle

OPTIONS

- 8 fibers per tube available for cables up to 96 strands
- 16 fibers per tube and 24 fibers per tube up to 144 fiber
- OS2 optical fibers with enhanced bend insensitive performance are available.
- OM4+ and OM5 Available

APPLICATIONS

- Ideal for high-density installations like data centers, central offices and overall premise applications where current or future data rates include 40 and 100 gigabits per second

STANDARDS

- ANSI/TIA-568.3-D
- ISO/IEC 11801, 2nd edition
- Telcordia GR-409-CORE
- OS2 glass is compliant to ITU-T G.657.A1

TEMPERATURE RANGE

- **Storage Temperature**
  -40°C to 70°C
  (-40°F to 158°F)
- **Installation Temperature**
  0°C to 60°C
  (32°F to 140°F)
- **Operation Temperature**
  0°C to 70°C
  (32°F to 158°F)

DIELECTRIC MATERIALS

- Overall Jacket: Flame-retardant Thermoplastic

NanoCore Armored Multi-Unit Micro Distribution (Plenum)

Fibers	Fibers Per Tube	Tube O.D. inches / mm	50 UM OM3	50 UM OM4	8.3 UM OS2
12	12	0.079" / 2.0mm	62251-12	62257-12	62255-12
24	12	0.079" / 2.0mm	62251-24	62257-24	62255-24
48	12	0.079" / 2.0mm	62251-48	62257-48	62255-48
72	12	0.079" / 2.0mm	62251-72	62257-72	62255-72
96	12	0.079" / 2.0mm	62251-96	62257-96	62255-96
144	12	0.079" / 2.0mm	62251-144	62257-144	62255-144

Standard Jacket Colors

OM3/OM4   OS2
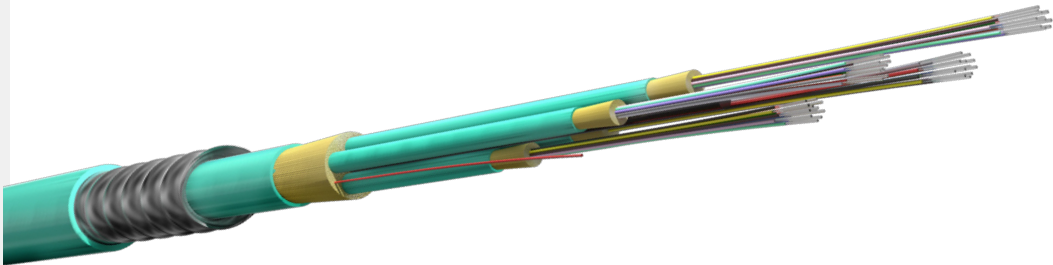
Optical Specifications TIA-568.3-D | ISO/IEC 11801, 2nd edition | Telcordia GR-409-CORE

Fiber Type	Max Attenuation (dB/km)		Min OFL Bandwidth (MHz-km)		Min EMBc Bandwidth (MHz-hm)		Gb Ethernet Distance (m)		10 Gb Ethernet Distance (m)	
	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)	850nm (MM)	1300nm (MM)
OM1	3.5	1.0	200	500	220	N/A	300	550	33	N/A
OM2	3.0	1.0	700	500	950	N/A	750	550	150	N/A
OM3	3.0	1.0	1500	500	2000	N/A	1000	550	300	N/A
OM4	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
OM5*	3.0	1.0	3500	500	4700	N/A	1100	550	550	N/A
	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)	1310nm (SM)	1550nm (SM)
OS2	0.5	0.5	N/A	N/A	N/A	N/A	> 25,000	> 40,000	10,000 - 25,000	40,000

*OM5 optical fiber tested by glass manufacturer and exceeds the requirements of all applicable industry standards.

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PROTERIAL

NanoCore® Armored Plenum
Indoor Loose Tube - 24 through 144 fibers
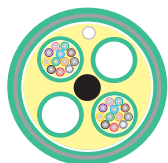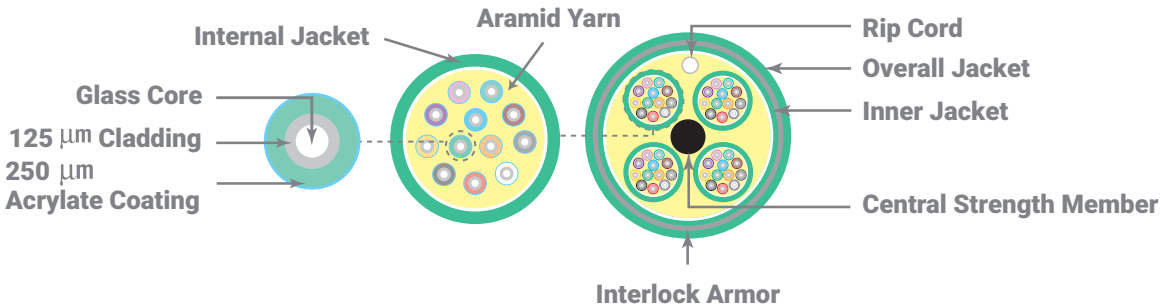(UL) OFCP c(UL) OFCP FT6

Specifications by Fiber Count

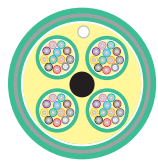| Fibers	Tube Layout	Cable O.D. inches / mm	Install Max Load Pounds	Install Max Load Newtons	Operating Max Load Pounds	Operating Max Load Newtons	Cable Weight lbs/kft	Cable Weight Kg/Km
12	2+2FxCSM	0.583" / 14.8mm	150	668	45	200	131.0	195.0
24	2+2FxCSM	0.583" / 14.8mm	150	668	45	200	132.0	197.5
48	4xCSM	0.583" / 14.8mm	150	668	45	200	133.0	197.9
72	6xCSM	0.647" / 16.4mm	150	668	45	200	154.0	229.2
96	8xCSM	0.675" / 17.1mm	150	668	45	200	183.0	272.3
144	9x3xCSM	0.723" / 18.4mm	150	668	45	200	194.0	288.7

CSM = Central Strength Member
F = Filler

MECHANICAL SPECS

- Bend radius, no load = 10x cable overall diameter
- Bend radius, load = 15x cable overall diameter

Internal Jacket
Aramid Yarn
Rip Cord
Overall Jacket
Glass Core
Inner Jacket
125 μm Cladding
250 μm Acrylate Coating
Central Strength Member
Interlock Armor

24 fibers   48 fibers   144 fibers

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